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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,243	05/31/2001	Robert Angelo Mercuri	P-1038	8204

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EXAMINER

FERGUSON, LAWRENCE D

ART UNIT PAPER NUMBER

1774

10

DATE MAILED: 04/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,243

Applicant(s)

MERCURI ET AL.

Examiner

Lawrence D Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-13 and 28-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-13 and 28-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment mailed February 03, 2003. Claims 6 and 14-27 were canceled, claims 1,3-5, 8,9,10,11 and 12 were amended and claims 28-38 were added rendering claims 1-5, 7-13 and 28-38 pending.

Claim Rejections – 35 USC § 103(a)

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mercuri et al (U.S. 5,902,762).

Mercuri discloses a flexible graphite composite for use in gaskets comprising a resin-impregnated flexible graphite sheet of about 0.1 mm and regions of randomly embedded ceramic fibers (zones with different characteristics, i.e. presence and composition of filler materials) (column 2, lines 1-67). Mercuri further shows 0.01 inch thick sheets of the flexible graphite (column 3, lines 29-35) and that the sheets are impregnated with about 17-19% of phenolic resin (column 4, lines 9-27). Mercuri does not specifically show that the difference in the concentration or presence of the embedded ceramic fibers is greater than about 5% as in instant claim 6. Mercuri does not show that the graphite sheet has an area weight of from about 0.001 to about 2.0 g/cm² as in instant claim 7. Though Mercuri shows that the density of the

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sheets is 1.5 gms/cc (column 4, lines 14-20), Mercuri does not show that the density of the regions of the ceramic fibers is at least 1.1 g/cc and that the graphite sheets has a density of less than about 1.0 g/cc as in instant claim 11. However, such a ranges and percentages are properties which can be easily determined by one of ordinary skill in the art. With regard to the limitation of the ranges and percentages, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. ranges and percentages) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are result effective as they control the amount of sealability, resin impregnation, and mechanical strength of graphic sheets. As such, they are optimizable. It would have been obvious to one of ordinary skill in the art to make the graphite sheets with the limitations of percentages and ranges since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215.

Claim Rejections – 35 USC § 103(a)

4. Claims 8-10 and 28-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mercuri et al (U.S. 5,902,762) in view of Howard (U.S. 4,961,991).

Mercuri is relied upon as above for claims 1-5, 7 and 11-13. Mercuri does not disclose that the graphite layers sandwich a layer of diverse material made of woven fabric and being nonporous. Mercuri also does not specifically disclose a second flexible graphite sheet. Howard teaches a flexible graphite laminate comprising a cloth disposed between the two sheets of

flexible graphite material (column 1, lines 59-62) where the cloth can be a woven or non-woven fabric and non-porous (column 2, lines 16-20). Mercuri and Howard are analogous art because they are from the field of flexible graphite materials. It would have been obvious to one of ordinary skill in the art to use the interlayer cloth in the graphite composite of Mercuri because Howard teaches the flexible graphite sheets with the intermediate core help make the article impervious to organic solvents (column 1, lines 45-50). Howard additionally teaches a second flexible graphite sheet, which is used in sealing gaskets for engines (column 1, lines 15-17).

Response to Arguments

5. Examiner acknowledges Applicant's election of claims 1-13 of Group I and withdraws the restriction requirement. Additionally, rejections made under 35 USC 112, second paragraph, are withdrawn due to Applicant amending claims 3-5, 8 and 11-12 and Applicant's corresponding remarks.

Rejection made under 35 USC 102(b) as being anticipated by Mercuri et al (U.S. 5,902,762) has been withdrawn due to Applicant further limiting claim 1 to include 'wherein the difference in the characteristic is greater than about 5%.'

Rejection made under 35 USC 103(a) as being unpatentable over Mercuri et al (U.S. 5,902,762) has been considered but is unpersuasive. Applicant argues amended claim 1 is patentable over the cited art for at least the reason that the claim invention includes at least one property that was unexpected as compared to the prior art in accordance with MPEP 716.02. Examiner respectfully disagrees because Applicant fails to show that the Mercuri reference

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flexible graphite article cannot show these features. Applicant states a material comprising a composite flexible graphite sheet having a plurality of zones which have at least one characteristic which differs by greater than 5% has the unexpected property of a lower thru plane resistance as compared to both a monolithic sheet and a composite not having the aforementioned difference in characteristic, where the declaration sent of Dr. Jeremy Klug shows the unexpected property. The submitted declaration has been carefully considered. It appears the experiment performed by Dr. Jeremy Klug is insufficient. The experimentation was not done in a manner as to show an improvement over the prior art cited in the case (i.e. Mercuri et al). Therefore the declaration is not commensurate in scope with the claimed invention being compared to the cited prior art. Furthermore, when performing an experiment to overcome prior art, it is preferred that the test examples be performed in triplicate for an accurate account of the results.

Rejection made under 35 USC 103(a) as being unpatentable over Mercuri et al (U.S. 5,902,762) in view of Aokai has been withdrawn due to better art being applied to meet the claim limitation of 8. Furthermore, rejection made under 35 USC 103(a) as being unpatentable over Mercuri et al (U.S. 5,902,762) in view of Aokai further in view of Boos et al (U.S. 3,648,126) has been withdrawn due to better art being applied to meet the claim limitations of 9 and 10.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703) 305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for

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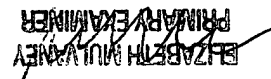
After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.



Lawrence D. Ferguson
Examiner
Art Unit 1774



ELIZABETH MULVANEY
PRIMARY EXAMINER



ELIZABETH MULVANEY
PRIMARY EXAMINER